

**In the Claims**

1           1. (Currently Amended) A switch comprising:  
2           a plurality of field effect transistors connected in series, each field effect transistor  
3 including a gate, a source, and a drain, each gate having a gate width and a gate length;  
4           said gate length of one of said series connected field effect transistors being a different  
5 size from said gate length of another series connected field effect transistor.

1           2. (Currently Amended) The switch as claimed in claim 1, wherein said gate of one of  
2 said plurality of series connected field effect transistor has a longer gate length ~~and/or gate width~~  
3 than said gate of said other series connected field effect transistor.

1           3. (Original) The switch as claimed in claim 1, wherein said gate of one of said plurality  
2 of series connected field effect transistor has a distance to its drain port that is less than a  
3 distance to its source port.

1           4. (Original) The switch as claimed in claim 1, wherein said gate of one of said plurality  
2 of series connected field effect transistor has a distance to its source port that is less than a  
3 distance to its drain port.

1           5. (Original) The switch as claimed in claim 3, wherein said gate of said other series  
2 connected field effect transistor has a distance to its source port that is equal to a distance to its  
3 drain port.

1           6. (Original) The switch as claimed in claim 4, wherein said gate of said other series  
2 connected field effect transistor has a distance to its source port that is equal to a distance to its  
3 drain port.

1           7. (Original) The switch as claimed in claim 1, wherein the different gate sizes increase a  
2 parasitic capacitance within the switch.

1           8. (Original) A switch comprising:

2 a plurality of dual-gate field effect transistors connected in series, each dual-gate field  
3 effect transistor including two gates, a source, and a drain;

4 one of said series connected dual-gate field effect transistors having a modified gate  
5 therein that is of a different size from gates of other series connected dual-gate field effect  
6 transistors.

1 9. (Original) The switch as claimed in claim 8, wherein said modified gate of said series  
2 connected dual-gate field effect transistor has a longer gate length and/or gate width than gates of  
3 said other series connected dual-gate field effect transistor.

1 10. (Original) The switch as claimed in claim 8, wherein said modified gate of said series  
2 connected dual-gate field effect transistor has a distance to its drain port that is less than a  
3 distance to its source port.

1 11. (Original) The switch as claimed in claim 8, wherein said modified gate of said series  
2 connected dual-gate field effect transistor has a distance to its source port that is less than a  
3 distance to its drain port.

1 12. (Original) The switch as claimed in claim 10, wherein gates of said other series  
2 connected dual-gate field effect transistors have a distance to its source port that is equal to a  
3 distance to its drain port.

1 13. (Original) The switch as claimed in claim 11, wherein gates of said other series  
2 connected dual-gate field effect transistors have a distance to its source port that is equal to a  
3 distance to its drain port.

1 14. (Original) The switch as claimed in claim 8, wherein a second series connected dual-  
2 gate field effect transistor has a modified gate therein that is of a different size from gates of  
3 other series connected dual-gate field effect transistors.

1 15. (Original) The switch as claimed in claim 8, wherein said dual-gate field effect  
2 transistors are high-electron-mobility-transistors.

1           16. (Original) The switch as claimed in claim 8, wherein the different gate sizes increase  
2 a parasitic capacitance within the switch.

1           17. (Original) The switch as claimed in claim 8, wherein said dual-gate field effect  
2 transistors include a transistor connection segment between said gates and a heavily doped cap  
3 layer fabricated upon said transistor connection segment between said gates.

1           **Claim18 (Cancelled)**

1           19. (Currently Amended) A The high-electron-mobility-transistor as claimed in claim 18,  
2 comprising:  
3           two gate fingers;  
4           a transistor connection segment between said gate fingers; and  
5           a heavily doped cap layer fabricated upon said transistor connection segment between  
6 said gate fingers; wherein  
7           said gate fingers being are of different sizes.

1           20. (Original) The high-electron-mobility-transistor as claimed in claim 19, wherein one  
2 of said gate fingers has a distance to its source port that is less than a distance to its drain port.

1           21. (Original) The high-electron-mobility-transistor as claimed in claim 19, wherein one  
2 of said gate fingers has a distance to its drain port that is less than a distance to its source port.

1           22. (Original) A radio frequency single pole double throw switch, comprising:  
2 a receiver port;  
3 a transmitter port;  
4 an antenna port;  
5 a receiver section connecting said receiver port to said antenna; and  
6 a transmitter section connecting said transmitter port to said antenna;  
7 said receiver section including a plurality of dual-gate field effect transistors connected in  
8 series, each dual-gate field effect transistor including two gates, a source, and a drain such that

9 one of said series connected dual-gate field effect transistors has a modified gate therein that is of  
10 a different size from gates of other series connected dual-gate field effect transistors.

1 23. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein a source of said modified gate transistor is connected to said receiver port.

1 24. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein a drain of said modified gate transistor is connected to said antenna port.

1 25. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein a second series connected dual-gate field effect transistor has a second modified gate  
3 therein that is of a different size from gates of other series connected dual-gate field effect  
4 transistors.

1 26. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 25, wherein a source of said modified gate transistor is connected to said receiver port and a  
3 drain of said second modified gate transistor is connected to said antenna port.

1 27. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said dual-gate field effect transistors are high-electron-mobility-transistors.

1 28. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said modified gate of said series connected dual-gate field effect transistor has a  
3 longer gate length and/or gate width than gates of said other series connected dual-gate field  
4 effect transistor.

1 29. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said modified gate of said series connected dual-gate field effect transistor has a  
3 distance to its drain port that is less than a distance to its source port.

1 30. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said modified gate of said series connected dual-gate field effect transistor has a  
3 distance to its source port that is less than a distance to its drain port.

1           31. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 29, wherein gates of said other series connected dual-gate field effect transistors have a distance  
3 to its source port that is equal to a distance to its drain port.

1           32. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 30, wherein gates of said other series connected dual-gate field effect transistors have a distance  
3 to its source port that is equal to a distance to its drain port.

1           33. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein the different gate sizes increase a parasitic capacitance within the switch.

1           34. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said dual-gate field effect transistors include a transistor connection segment  
3 between said gates and a heavily doped cap layer fabricated upon said transistor connection  
4 segment between said gates.

1           35. (Currently Amended) A radio frequency single pole double throw switch, comprising:  
2 a receiver port;  
3 a transmitter port;  
4 an antenna port;  
5 a receiver section connecting said receiver port to said antenna; and  
6 a transmitter section connecting said transmitter port to said antenna;  
7 said receiver section ~~including a plurality of field effect transistors connected in series,~~  
8 ~~each field effect transistor including a gate, a source, and a drain such that one of said series~~  
9 ~~connected field effect transistors has a modified gate therein that is a different size from said gate~~  
10 ~~of another series connected field effect transistor including,~~

11               a first receiver dual-gate high electron mobility transistor having  
12               gates of different lengths, and

13               a second receiver dual-gate high electron mobility transistor having  
14               gates of different lengths.

1           36. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 35, wherein the source of said first receiver dual-gate high electron mobility  
3 ~~modified-gate~~ transistor is connected to said receiver port.

1           37. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 35, wherein the drain of said second receiver dual-gate high electron mobility  
3 ~~modified-gate~~ transistor is connected to said antenna port.

1           38. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 35, wherein ~~a second series connected field effect transistors has a second~~  
3 ~~modified-gate therein that is of a different size from gates of other series connected field effect~~  
4 ~~transistors~~ said transmitter section includes a first transmitter dual-gate high electron mobility  
5 transistor having gates of different lengths and a second transmitter dual-gate high electron  
6 mobility transistor having gates of different lengths.

1           39. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 38, wherein the source of said first transmitter dual-gate high electron mobility  
3 ~~modified-gate~~ transistor is connected to said receiver port and the drain of said second transmitter  
4 dual-gate high electron mobility ~~modified-gate~~ transistor is connected to said antenna port.

1           40. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 35, wherein a first said ~~modified~~ gate of said first receiver dual-gate high  
3 electron mobility transistor ~~series connected field effect transistor~~ has a longer gate length and/or  
4 gate width than ~~gates of said other series connected field effect transistor~~ a second gate of said  
5 first receiver dual-gate high electron mobility transistor.

1           41. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 35, wherein a first ~~said modified~~ gate of said first receiver dual-gate high  
3 electron mobility transistor ~~series connected field effect transistor~~ has a distance to its drain port  
4 that is less than a distance to its source port.

1           42. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 35, wherein a first said-modified gate of said second receiver dual-gate high  
3 electron mobility transistor series-connected field-effect transistor has a distance to its source port  
4 that is less than a distance to its drain port.

1           **Cancelled Claims 43-44**

1           45. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 35, wherein the different gate sizes lengths increase a parasitic capacitance  
3 within the switch.

1           46. (Currently Amended) The radio frequency single pole double throw switch claimed in  
2 claim 35, wherein the different gate sizes lengths improve the linearity without impacting the  
3 ESD and EOS ruggedness.

1           47. (New) A series connected dual-gate transistor, comprising:  
2 a first gate; and  
3 a second gate;  
4 said first gate having a gate width and a gate length;  
5 said second gate having a gate width and a gate length;  
6 said gate length of said first gate being a different size from said gate length of said  
7 second gate.

1           48. (New) The series connected dual-gate transistor as claimed in claim 47, wherein said  
2 said gate width of said first gate being a different size from said gate width of said second gate.

1           49. (New) A dual-gate transistor having gates with different size lengths.

1           50. (New) A dual-gate transistor having gates with different size lengths, the gates having  
2 different size widths.